

WHAT IS CLAIMED IS:

1. A non-contact tonometer comprising:
 - an alignment light source for projecting a light flux for alignment to a cornea of an eye to
5 be examined;
 - alignment detection means for receiving reflection light of said light flux for alignment from the eye to be examined to detect an alignment state of the eye to be examined;
 - 10 pressurizing means for blowing a fluid onto the cornea of the eye to be examined to deform the cornea;
 - an intraocular pressure measurement light source for projecting a light flux for measurement
15 to the eye to be examined;
 - intraocular pressure measurement light receiving means for detecting a reflected light quantity of said light flux for measurement from the cornea of the eye to be examined;
 - 20 deformation detection means for detecting a predetermined output value from said intraocular pressure measurement light receiving means to detect certain deformation of the cornea; and
 - reliability determination means for comparing
25 an output of said intraocular pressure measurement light receiving means and a reference value to determine reliability;

wherein said reference value is changed in accordance with a detection result of said alignment detection means.

5 2. A non-contact tonometer according to claim 1, wherein said reference value is changed based on reflected light quantity of the alignment light flux from the eye to be examined received by said alignment detection means.

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 3. A non-contact tonometer according to claim 1, wherein said reference value is changed based on a peak value of the alignment light flux reflected from the eye to be examined detected by
15 said alignment detection means.

 4. A non-contact tonometer according to claim 1, wherein in the case that the determination output of said reliability
20 determination means is "reliable", a measurement of the intraocular pressure is additionally performed.

 5. A method of measuring intraocular
25 pressure comprising the steps of:
 projecting an alignment detection light flux to an eye to be examined;

performing alignment adjustment based on
reflected light of the alignment detection light
flux;

blowing a fluid onto the eye to be examined
5 while projecting an intraocular pressure
measurement light flux to the eye to be examined;

receiving reflected light of said intraocular
pressure measurement light flux from said eye to
be examined and outputting a received light
10 signal;

determining a reference value to be compared
with said received light signal based on received
light quantity of said reflected light of the
alignment detection light flux; and

15 determining validity of said received light
signal by comparing said reference value and a
level of the received light signal.

6. A method of measuring intraocular
20 pressure according to claim 5 further comprising a
step of measuring an intraocular pressure value in
the case that it is determined that said received
light signal is valid.

25 7. A method according to claim 5 further
comprising a step of displaying the measured value
on a monitor in the case that it is determined

that said received light signal is valid.

8. A method of measuring intraocular pressure comprising the steps of:

- 5 projecting an alignment detection light flux to an eye to be examined;
 receiving reflected light of said alignment detection light flux from the eye to be examined;
 projecting intraocular pressure measurement
10 light flux to the eye to be examined; and
 determining validity of measurement of the intraocular pressure by comparing a reference value determined based on said reflected light of the alignment light flux from said eye to be
15 examined and a level of reflected light of said intraocular pressure measurement light flux.